ELSEVIER

Journal of Alloys and Compounds 316 (2001) 321

Journal of ALLOYS AND COMPOUNDS

www.elsevier.com/locate/jallcom

Author Index of Volume 316

Akiba, E., 284
Akinlade, O., 226
Akiyama, T., 118
Almeida, M., L4

Babu, R., 124, 159
Bächer, I., 299
Bauer, J., 75
Belan, B.D., 64
Bellingeri, P., 39
Bellissent, R., 179
Belyavina, N.M., 309
Bermanec, V., 316
Bidaud, E., 75
Biscarini, A., 189
Bocelli, G., 220
Brazis, P., 137
Buljan, A., 146

Campanella, R., 189
Chang, S.-Y., 275
Chen, X.Y., 269
Coluzzi, B., 189

Daouchi, B., 239
Ding, J., 260
Drewes, K., 175
Drews-Nicolai, L., 1
Du, Y.-w., 296

Franz, H., 175
Frohberg, M.G., 175
Fuenzalida, V.M., 250
Fujita, A., 70
Fukamichi, K., 70

Galadzhun, Y.V., 64
Gebel, B., 299
Gómez-Romero, P., 90
Gonçalves, A.P., L4
Goudy, A.J., 93
Gulay, L.D., 209
Gutfleisch, O., 290

Haberkorn, R., 203
Handstein, A., 290, 299
Harbrecht, B., 99
Henríquez, A., 90
Hiebl, K., 75
Hofmann, M., 58
Hohlneicher, G., 1
Hong, S.-K., 275
Hu, B.P., 269
Huang, L., 256
Hüning, F., 21
Hyuk Shin, D., 275

Iijima, Y., 70
Ilyenko, S., 239
Irisawa, K., 70

Jacobs, H., 21
Jardet, K., 179
Jiang, Z.L., 269
Jun Cho, S., 275

Kaczorowski, D., 64
Kamiyama, T., 284
Kanatzidis, M.G., 137
Kannewurf, C.R., 137
Kao, Y.-H., 280
Kapshuk, A.A., 309
Kirchner, A., 290
Klyamkin, S.N., 236
Kockelmann, W., 21
Krishnan, K., 264
Krumes, D., 316
Krykhovets, O.V., 193
Kudrnovski, D., 316
Kulpa, M., 51

Lane, M., 137
Latacz, Z., 18
Leciejewicz, J., 58
Leineweber, A., 21
Li, L., 118
Li, Y., 260
Lin, H., 256
Lin, Z., 131
Liu, J., 172
Liu, S.-Y., 280
Liu, X., 256
Llanos, J., 90, 146
Lueken, H., 21

Ma, C.L., 269
Markiv, V.Ya., 309
Masuda, Y., 107
Matsubara, E., 70
Mattern, N., 299
Mazzolai, F.M., 189
Mazzolai, G., 189
Molins, E., 90
Morozkin, A.V., L1, 236
Mujica, C., 90, 146
Muller, Ch., 179
Müller, K.-H., 290
Mydlarz, T., 51

Nagarajan, K., 124, 159
Nagase, T., 212
Nakamura, Y., 284
Nan, J., 131
Neumann, M., 51
Nikitin, S.A., 46
Nirmala, R., L1

Ohnaka, I., 212
Oikawa, K.-i., 284
Olekseyuk, I.D., 193
Ossi, P.M., 39

Penc, B., 58
Perng, T.-P., 280
Pikul, A., 64

Rama Rao, G.A., 264
Rangan, K.K., 137
Record, M.C., 239
Righi, L., 220
Rixecker, G., 203
Romaka, L.P., 169
Rösner-Kuhn, M., 175

Salamakha, P., L4, 220
Salamova, A.A., 46
Sankaranarayanan, V., L1
Sato, H., 245
Satre, P., 179
Sebaoun, A., 179
Sethupathi, K., L1
Shen, B.G., 269
Shen, B.-g., 296
Shiga, M., 245
Si, L., 260
Singh Mudher, K.D., 264
Smith, G., 93
Sologub, O., L4, 220
Sommer, F., 226
Stadnyk, Yu.V., 169
Stępień-Damm, J., 64
Stubičar, M., 316
Stubičar, N., 316
Su, Y.O., 280
Sugawara, H., 245
Sumin, V.V., 189
Sviridov, I.A., 236
Sych, A.M., 309
Szafrański, A.W., 82
Szytuła, A., 58

Talik, E., 51
Tan, H., 260
Tanabe, Y., 245
Tedenac, J.C., 239
Tereshina, I.S., 46
Titov, Yu.A., 309
Trofimenko, N., 153

Ullmann, H., 153

Venugopal, V., 124, 159, 264
Verbetsky, V.N., 46

Wada, H., 245
Wang, D.-H., 296
Wang, L., 260
Wang, M., 296
Wang, X., 107, 256
Wang, Y.Z., 269
Wannek, C., 99
Winiarski, A., 51
Wipf, H., 189
Wolcyrz, M., 209

Xia, C.-T., 250
Xu, N., 113

Yagi, J.-i., 118
Yamauchi, I., 212
Yamazaki, Y., 70
Yang, C.P., 269
Yang, J., 290
Yang, Y., 131
Yang, Z., 172
Yao, B., 260
Yaschuk, V.P., 309
Yin, J.-h., 296
Yin, X.-B., 296
Yuan, X., 113
Yukawa, Y., 107

Zarate, R.A., 250
Zaremba, V.I., 64
Zhang, H.W., 269
Zhong, X., 172
Zhou, H.W., 269
Zhu, J., 269
Zhuravleva, M.A., 137
Zinkevich, M., 299
Zygmunt, A., 58

Elsevier Science B.V.
PII: S0925-8388(01)00933-1

ELSEVIER

Journal of Alloys and Compounds 316 (2001) 323–327

Journal of ALLOYS AND COMPOUNDS

www.elsevier.com/locate/jallcom

Subject Index of Volume 316

Al–Ga–Zn
temperature dependent X-ray and neutron diffraction study of the liquid–solid and solid–solid equilibria in the $Al_{29.2}Ga_{27}Zn_{43.8}$ ternary alloy 179
Alkaline earth molybdates
electrochemical preparation of crystallized $Ba_{1-x}Sr_xMoO_4$ solid-solution films at room-temperature 250
Alloys
generalized matching rules for aperiodic tilings 39
Amorphous and crystalline powder phases
microstructure evolution of an equimolar powder mixture of ZrO_2–TiO_2 during high-energy ball-milling and post-annealing 316
Amorphous materials
generalized matching rules for aperiodic tilings 39
hard magnetic properties and magnetocaloric effect in amorphous NdFeAl ribbons 260
Antiferromagnetism
parallel magnetic and electric field dependence of the Néel temperature in Cr_2O_3—the modified Oguchi method 18

Borate glass
luminescence properties of Ce^{3+} and Tb^{3+} doped rare earth borate glasses 256

Calorimetry
standard enthalpies of formation of lanthanum gallides by high temperature reaction calorimetry 124
Calorimetry (E)
standard enthalpies of formation of cerium gallides by high temperature reaction calorimetry 159
Casting
microstructure and tensile properties of bi-materials with macro-interface between unreinforced magnesium and composite 275
Ce^{3+} ion
luminescence properties of Ce^{3+} and Tb^{3+} doped rare earth borate glasses 256
Chalcogenides
preparation, transport properties, and electronic structure of quaternary sulfides based on tetrahedral $[MS_4]^{4-}$ units: $SrCu_2MS_4$ (M=Ge, Sn) 146
Charge–discharge performance
the effects of surface treatment on metal hydride electrodes using a weak acid solution containing Ni(II) 131
Chemical short range order
concentration fluctuations and thermodynamic properties of ternary liquid alloys 226
Chemical synthesis
structure refinement of samarium monothio oxide 90
flux synthesis, structure and physical properties of new pseudo-binary $REAl_{1-x}Ge_x$ compounds 137
Chromium oxide
parallel magnetic and electric field dependence of the Néel temperature in Cr_2O_3—the modified Oguchi method 18

Crystal and ligand fields
studies on the thermal dehydration behavior of $Ln[Fe(CN)_6]\cdot nH_2O$ (Ln=La–Yb; n=4, 5) by means of controlled-rate thermal analysis and Raman spectrometry 107
Crystal structure
generalized matching rules for aperiodic tilings 39
crystal structure, magnetic and electrical properties of new ternary indides RPtIn (R=Pr, Sm) 64
change in the magnetic state of antiferromagnetic $La(Fe_{0.88}Al_{0.12})_{13}$ by hydrogenation 70
structural and magnetic properties of the rare-earth–borocarbides, $R_3B_2C_6$ (R=Y, Ce–Tm) 75
single crystal investigation of the binary NdB_4 compound L4
estimation of effective ionic radii in highly defective perovskite-type oxides from experimental data 153
$Fe_{16}Nb_6Si_7$ and $Fe_{16}Ta_6Si_7$: New $D8_8$ phases synthesized by the crystallization of mechanically alloyed amorphous powders 203
crystal structure of RAgPb (R=La, Ce, Pr, Nd, Sm, Gd, Tb, Dy, Ho) compounds 209
single-crystal investigation of the neodymium rhodium germanides $NdRh_2Ge_2$, $Nd_2Rh_3Ge_5$ and $NdRh_{0.79}Ge_{0.54}$ 220
new ternary $Ce_6Ni_2Si_3$-type $Sm_6\{Co, Ni\}_2Si_3$ compounds and their interaction with hydrogen 236
structural and thermochemical studies on Cr_2TeO_6 and Fe_2TeO_6 264
crystal structure of two hydrides formed from a Ti–V–Mn BCC solid solution alloy studied by time-of-flight neutron powder diffraction — a NaCl structure and a CaF_2 structure 284
homogeneity range, crystal structure and magnetic properties of the $ThMn_{12}$-type compounds $Gd_{1-n}Nd_n(Fe,Mo)_{12}$ (n=0–1.0) 299
synthesis, structure and ferroelectric properties of heteroblock slab phases in $La_2Ti_2O_7$–$LaTaO_4$ system 309
Crystal structure and symmetry
phase equilibria in the palladium-rich part of the gallium–palladium system. The crystal structures of Ga_3Pd_7 and $Ga_{1-x}Pd_{2+x}$ 99
studies on the thermal dehydration behavior of $Ln[Fe(CN)_6]\cdot nH_2O$ (Ln=La–Yb; n=4, 5) by means of controlled-rate thermal analysis and Raman spectrometry 107

Density functional theory
electronic structure calculations for the ternary intermetallic compounds A_2MX and AMX_2 (A=Li; M=Rh, Pd, Ir, Pt; X=Al, Ga, In) using density-functional theory 1

Electrical properties
preparation, transport properties, and electronic structure of quaternary sulfides based on tetrahedral $[MS_4]^{4-}$ units: $SrCu_2MS_4$ (M=Ge, Sn) 146
Electrical resistance
thermoelectric power of hydrogenated palladium and some of its dilute alloys, between 80 and 300 K 82

Elsevier Science B.V.
PII: S0925-8388(01)00935-5

Electrical resistivity
electronic structure and magnetic properties of $HoMn_2$ single crystals 51
Electrical transport
multi-magnetic transitions in $Tb_2Mn_2Si_x$ L1
crystal structure, magnetic and electrical properties of new ternary indides RPtIn (R=Pr, Sm) 64
Electric and magnetic field dependence of T_N
parallel magnetic and electric field dependence of the Néel temperature in Cr_2O_3—the modified Oguchi method 18
Electrochemical reactions
determination of hydrogen diffusion coefficient in metal hydride electrode by cyclic voltammetry 113
Electronic structure
electronic structure and magnetic properties of $HoMn_2$ single crystals 51
preparation, transport properties, and electronic structure of quaternary sulfides based on tetrahedral $[MS_4]^{4-}$ units: $SrCu_2MS_4$ (M=Ge, Sn) 146
Electronic structure calculations
electronic structure calculations for the ternary intermetallic compounds A_2MX and AMX_2 (A=Li; M=Rh, Pd, Ir, Pt; X=Al, Ga, In) using density-functional theory 1
Energy storage materials
standard enthalpies of formation of lanthanum gallides by high temperature reaction calorimetry 124
Enthalpy
enthalpy measurements of the solid high-temperature β-phase of titanium and zirconium by levitation drop calorimetry 175
Enthalpy of fusion
enthalpy measurements of the solid high-temperature β-phase of titanium and zirconium by levitation drop calorimetry 175

Ferroelectric properties
synthesis, structure and ferroelectric properties of heteroblock slab phases in $La_2Ti_2O_7$–$LaTaO_4$ system 309
FE-SEM
microstructure and tensile properties of bi-materials with macro-interface between unreinforced magnesium and composite 275
Fracture surface
microstructure and tensile properties of bi-materials with macro-interface between unreinforced magnesium and composite 275

Gas–solid reactions
phase equilibria in the palladium-rich part of the gallium–palladium system. The crystal structures of Ga_3Pd_7 and $Ga_{1-x}Pd_{2+x}$ 99

Heat capacity
magnetocaloric effects of Laves phase $Er(Co_{1-x}Ni_x)_2$ compounds 245
High-energy dry ball-mill and post-anneal processing
microstructure evolution of an equimolar powder mixture of ZrO_2–TiO_2 during high-energy ball-milling and post-annealing 316
Hydrides
thermodynamics, kinetics and modeling studies of the $LaNi_{5-x}Co_x$ hydride system 93
Hydrogen absorbing materials
transformations of magnetic phase diagram as a result of insertion of hydrogen and nitrogen atoms in crystalline lattice of $RFe_{11}Ti$ compounds 46
change in the magnetic state of antiferromagnetic $La(Fe_{0.88}Al_{0.12})_{13}$ by hydrogenation 70
new ternary $Ce_6Ni_2Si_3$-type $Sm_6\{Co, Ni\}_2Si_3$ compounds and their interaction with hydrogen 236
stresses induced by hydrogen absorption and desorption in Pd nanofilms 280
crystal structure of two hydrides formed from a Ti–V–Mn BCC solid solution alloy studied by time-of-flight neutron powder diffraction — a NaCl structure and a CaF_2 structure 284
Hydrogenated palladium alloys
thermoelectric power of hydrogenated palladium and some of its dilute alloys, between 80 and 300 K 82
Hydrogen in metals
a neutron-spectroscopy study of the local vibrations, the interstitial sites and the solubility limit of hydrogen in niobium–molybdenum alloys 189
Hydrogen storage
activity and capacity of hydrogen storage alloy Mg_2NiH_4 produced by hydriding combustion synthesis 118
Hydrogen storage materials
determination of hydrogen diffusion coefficient in metal hydride electrode by cyclic voltammetry 113
standard enthalpies of formation of lanthanum gallides by high temperature reaction calorimetry 124
Hydrogen storage materials (A)
standard enthalpies of formation of cerium gallides by high temperature reaction calorimetry 159

Inorganic compounds
structure refinement of samarium monothio oxide 90
In-situ and ex-situ spectroscopic characterizations
the effects of surface treatment on metal hydride electrodes using a weak acid solution containing Ni(II) 131
Intermetallics
phase equilibria in the palladium-rich part of the gallium–palladium system. The crystal structures of Ga_3Pd_7 and $Ga_{1-x}Pd_{2+x}$ 99
standard enthalpies of formation of lanthanum gallides by high temperature reaction calorimetry 124
phase equilibria in the Hf–Ni–Sn ternary system and crystal structure of the Hf_2Ni_2Sn compound 169
the Pb–In–Se system: phase diagram of the Se-rich part 239
Intermetallics (A)
standard enthalpies of formation of cerium gallides by high temperature reaction calorimetry 159
Inter-metallics, Miscellaneous
activity and capacity of hydrogen storage alloy Mg_2NiH_4 produced by hydriding combustion synthesis 118
Interstitial alloys
stresses induced by hydrogen absorption and desorption in Pd nanofilms 280
Iron nitrides
nitrogen ordering and ferromagnetic properties of ϵ-Fe_3N_{1+x} ($0.10 \leq x \leq 0.39$) and ϵ-$Fe_3(N_{0.80}C_{0.20})_{1.38}$ 21

Liquid alloys
concentration fluctuations and thermodynamic properties of ternary liquid alloys 226
Liquid phase crystallisation
temperature dependent X-ray and neutron diffraction study of the liquid–solid and solid–solid equilibria in the $Al_{29.2}Ga_{27}Zn_{43.8}$ ternary alloy 179
Local hydrogen vibrations
a neutron-spectroscopy study of the local vibrations, the interstitial sites and the solubility limit of hydrogen in niobium–molybdenum alloys 189
Luminescence
luminescence properties of Ce^{3+} and Tb^{3+} doped rare earth borate glasses 256

Macro-interface
microstructure and tensile properties of bi-materials with macro-interface between unreinforced magnesium and composite 275
Magnetically ordered compounds
magnetocaloric effects of Laves phase $Er(Co_{1-x}Ni_x)_2$ compounds 245

Magnetically ordered materials
transformations of magnetic phase diagram as a result of insertion of hydrogen and nitrogen atoms in crystalline lattice of $RFe_{11}Ti$ compounds 46
magnetic properties and magnetic structures of RIrSi (R=Tb–Er) series of compounds 58
homogeneity range, crystal structure and magnetic properties of the $ThMn_{12}$-type compounds $Gd_{1-n}Nd_n(Fe,Mo)_{12}$ (n=0–1.0) 299
Magnetic measurements
multi-magnetic transitions in $Tb_2Mn_3Si_5$ L1
transformations of magnetic phase diagram as a result of insertion of hydrogen and nitrogen atoms in crystalline lattice of $RFe_{11}Ti$ compounds 46
magnetic properties and magnetic structures of RIrSi (R=Tb–Er) series of compounds 58
crystal structure, magnetic and electrical properties of new ternary indides RPtIn (R=Pr, Sm) 64
change in the magnetic state of antiferromagnetic $La(Fe_{0.88}Al_{0.12})_{13}$ by hydrogenation 70
structural and magnetic properties of the rare-earth–borocarbides, $R_5B_2C_6$ (R=Y, Ce–Tm) 75
magnetocaloric effects of Laves phase $Er(Co_{1-x}Ni_x)_2$ compounds 245
hard magnetic properties and magnetocaloric effect in amorphous NdFeAl ribbons 260
microstructure and magnetic properties of two-phase nanocomposite $Nd_9Fe_{85.5}Nb_{1.0}B_{4.5-y}C_y$ (y=0.5–4.5) magnets 269
magnetic properties of melt-spun $(Nd,Dy)_2Fe_{14}(B,C)$ 290
Magnetic structure
nitrogen ordering and ferromagnetic properties of ϵ-Fe_3N_{1-x} ($0.10 \le x \le 0.39$) and ϵ-$Fe_3(N_{0.80}C_{0.20})_{1.38}$ 21
Magnetic susceptibility
electronic structure and magnetic properties of $HoMn_2$ single crystals 51
Magnetization
nitrogen ordering and ferromagnetic properties of ϵ-Fe_3N_{1-x} ($0.10 \le x \le 0.39$) and ϵ-$Fe_3(N_{0.80}C_{0.20})_{1.38}$ 21
electronic structure and magnetic properties of $HoMn_2$ single crystals 51
homogeneity range, crystal structure and magnetic properties of the $ThMn_{12}$-type compounds $Gd_{1-n}Nd_n(Fe,Mo)_{12}$ (n=0–1.0) 299
Mechanical alloying
$Fe_{16}Nb_6Si_7$ and $Fe_{16}Ta_6Si_7$: New $D8_a$ phases synthesized by the crystallization of mechanically alloyed amorphous powders 203
Mechanical properties
microstructure and tensile properties of bi-materials with macro-interface between unreinforced magnesium and composite 275
stresses induced by hydrogen absorption and desorption in Pd nanofilms 280
Metal hydride electrodes
the effects of surface treatment on metal hydride electrodes using a weak acid solution containing Ni(II) 131
Metals
flux synthesis, structure and physical properties of new pseudo-binary $REAl_{1-x}Ge_x$ compounds 137
stresses induced by hydrogen absorption and desorption in Pd nanofilms 280
Mössbauer spectroscopy
$Fe_{16}Nb_6Si_7$ and $Fe_{16}Ta_6Si_7$: New $D8_a$ phases synthesized by the crystallization of mechanically alloyed amorphous powders 203

Nanocomposite magnets
magnetic properties and magnetic domain structure of $Nd_9Dy_2Fe_{82}Co_4B_6$ nanocomposite magnets 296
Nanostructures
microstructure and magnetic properties of two-phase nanocomposite $Nd_9Fe_{85.5}Nb_{1.0}B_{4.5-y}C_y$ (y=0.5–4.5) magnets 269
Neutron diffraction
nitrogen ordering and ferromagnetic properties of ϵ-Fe_3N_{1-x} ($0.10 \le x \le 0.39$) and ϵ-$Fe_3(N_{0.80}C_{0.20})_{1.38}$ 21
magnetic properties and magnetic structures of RIrSi (R=Tb–Er) series of compounds 58
crystal structure of two hydrides formed from a Ti–V–Mn BCC solid solution alloy studied by time-of-flight neutron powder diffraction — a NaCl structure and a CaF_2 structure 284
Neutron spectroscopy
a neutron-spectroscopy study of the local vibrations, the interstitial sites and the solubility limit of hydrogen in niobium–molybdenum alloys 189
Nuclear reactor materials
structural and thermochemical studies on Cr_2TeO_6 and Fe_2TeO_6 264

Optical properties
preparation, transport properties, and electronic structure of quaternary sulfides based on tetrahedral $[MS_4]^{4-}$ units: $SrCu_2MS_4$ (M=Ge, Sn) 146
Ordering of nitrogen
nitrogen ordering and ferromagnetic properties of ϵ-Fe_3N_{1-x} ($0.10 \le x \le 0.39$) and ϵ-$Fe_3(N_{0.80}C_{0.20})_{1.38}$ 21
Oxide materials
estimation of effective ionic radii in highly defective perovskite-type oxides from experimental data 153
structural and thermochemical studies on Cr_2TeO_6 and Fe_2TeO_6 264

Permanent magnets
microstructure and magnetic properties of two-phase nanocomposite $Nd_9Fe_{85.5}Nb_{1.0}B_{4.5-y}C_y$ (y=0.5–4.5) magnets 269
magnetic properties of melt-spun $(Nd,Dy)_2Fe_{14}(B,C)$ 290
Phase diagrams
phase equilibria in the Hf–Ni–Sn ternary system and crystal structure of the Hf_2Ni_2Sn compound 169
the Ag_2Se–In_2Se_3–$SnSe_2$ system 193
the Pb–In–Se system: phase diagram of the Se-rich part 239
Powder X-ray diffraction
phase equilibria in the palladium-rich part of the gallium–palladium system. The crystal structures of Ga_3Pd_7 and $Ga_{1-x}Pd_{2+x}$ 99
Praseodymium nickel titanium
the 573 K and 773 K isothermal sections of the phase diagram of the Pr–Ni–Ti ternary system 172
Pr–Ni–Ti phase diagram
the 573 K and 773 K isothermal sections of the phase diagram of the Pr–Ni–Ti ternary system 172

Quasicrystals
generalized matching rules for aperiodic tilings 39

Rapid quenching
eutectoid decomposition in rapidly solidified α-Fe_2Si_5-based thermoelectric alloys 212
microstructure and magnetic properties of two-phase nanocomposite $Nd_9Fe_{85.5}Nb_{1.0}B_{4.5-y}C_y$ (y=0.5–4.5) magnets 269
magnetic properties of melt-spun $(Nd,Dy)_2Fe_{14}(B,C)$ 290
Rare earth
crystal structure of RAgPb (R=La, Ce, Pr, Nd, Sm, Gd, Tb, Dy, Ho) compounds 209
Rare earth alloys
hard magnetic properties and magnetocaloric effect in amorphous NdFeAl ribbons 260

Rare earth alloys and compounds
homogeneity range, crystal structure and magnetic properties of the $ThMn_{12}$-type compounds $Gd_{1-n}Nd_n(Fe,Mo)_{12}$ (n=0–1.0) 299
Rare earth alloys and compounds (A)
standard enthalpies of formation of cerium gallides by high temperature reaction calorimetry 159
Rare earth compounds
multi-magnetic transitions in $Tb_2Mn_2Si_2$ L1
single crystal investigation of the binary NdB_4 compound L4
transformations of magnetic phase diagram as a result of insertion of hydrogen and nitrogen atoms in crystalline lattice of $RFe_{11}Ti$ compounds 46
magnetic properties and magnetic structures of RIrSi (R=Tb–Er) series of compounds 58
crystal structure, magnetic and electrical properties of new ternary indides RPtIn (R=Pr, Sm) 64
change in the magnetic state of antiferromagnetic $La(Fe_{0.88}Al_{0.12})_{13}$ by hydrogenation 70
single-crystal investigation of the neodymium rhodium germanides $NdRh_2Ge_2$, $Nd_2Rh_3Ge_5$ and $NdRh_{0.79}Ge_{0.54}$ 220
new ternary $Ce_6Ni_2Si_3$-type $Sm_6\{Co, Ni\}_2Si_3$ compounds and their interaction with hydrogen 236
magnetocaloric effects of Laves phase $Er(Co_{1-x}Ni_x)_2$ compounds 245
microstructure and magnetic properties of two-phase nanocomposite $Nd_9Fe_{85.5}Nb_{1.0}B_{4.5-y}C_y$ (y=0.5–4.5) magnets 269
magnetic properties of melt-spun $(Nd,Dy)_2Fe_{14}(B,C)$ 290
Rare earth metal compounds
structural and magnetic properties of the rare-earth–borocarbides, $R_2B_2C_3$ (R=Y, Ce–Tm) 75
Rare-earth–transition metal compounds
electronic structure and magnetic properties of $HoMn_2$ single crystals 51
Reaction synthesis
activity and capacity of hydrogen storage alloy Mg_2NiH_4 produced by hydriding combustion synthesis 118
Remanence enhancement and exchange coupling
magnetic properties and magnetic domain structure of $Nd_9Dy_2Fe_{82}Co_2B_6$ nanocomposite magnets 296

Scanning electron microscopy
microstructure and tensile properties of bi-materials with macro-interface between unreinforced magnesium and composite 275
Semiconductors
generalized matching rules for aperiodic tilings 39
preparation, transport properties, and electronic structure of quaternary sulfides based on tetrahedral $[MS_4]^{4-}$ units: $SrCu_2MS_4$ (M=Ge, Sn) 146
the Ag_2Se–In_2Se_3–$SnSe_2$ system 193
Sensitization
luminescence properties of Ce^{3+} and Tb^{3+} doped rare earth borate glasses 256
Single crystal
electronic structure and magnetic properties of $HoMn_2$ single crystals 51
Slab phases
synthesis, structure and ferroelectric properties of heteroblock slab phases in $La_2Ti_2O_7$–$LaTaO_4$ system 309
Solid metals
enthalpy measurements of the solid high-temperature β-phase of titanium and zirconium by levitation drop calorimetry 175
Solid solution
electrochemical preparation of crystallized $Ba_{1-x}Sr_xMoO_4$ solid-solution films at room-temperature 250
Solid-state reactions
structural and thermochemical studies on Cr_2TeO_6 and Fe_2TeO_6 264
Spectral emissivity
enthalpy measurements of the solid high-temperature β-phase of titanium and zirconium by levitation drop calorimetry 175
Squeeze casting
microstructure and tensile properties of bi-materials with macro-interface between unreinforced magnesium and composite 275
Structural materials
microstructure and tensile properties of bi-materials with macro-interface between unreinforced magnesium and composite 275
Surface properties
the effects of surface treatment on metal hydride electrodes using a weak acid solution containing Ni(II) 131
Surface treatment methods
the effects of surface treatment on metal hydride electrodes using a weak acid solution containing Ni(II) 131
Synthesis
electrochemical preparation of crystallized $Ba_{1-x}Sr_xMoO_4$ solid-solution films at room-temperature 250
Synthesis of $ZrTiO_4$
microstructure evolution of an equimolar powder mixture of ZrO_2–TiO_2 during high-energy ball-milling and post-annealing 316

Tb^{3+} ion
luminescence properties of Ce^{3+} and Tb^{3+} doped rare earth borate glasses 256
Ternary alloy
temperature dependent X-ray and neutron diffraction study of the liquid–solid and solid–solid equilibria in the $Al_{29.2}Ga_{27}Zn_{43.8}$ ternary alloy 179
Ternary intermetallic compounds
electronic structure calculations for the ternary intermetallic compounds A_2MX and AMX_2 (A=Li; M=Rh, Pd, Ir, Pt; X=Al, Ga, In) using density-functional theory 1
Ternary isothermal section
the 573 K and 773 K isothermal sections of the phase diagram of the Pr–Ni–Ti ternary system 172
Thermal analysis
phase equilibria in the palladium-rich part of the gallium–palladium system. The crystal structures of Ga_3Pd_7 and $Ga_{1-x}Pd_{2+x}$ 99
studies on the thermal dehydration behavior of $Ln[Fe(CN)_6]\cdot nH_2O$ (Ln=La–Yb; n=4, 5) by means of controlled-rate thermal analysis and Raman spectrometry 107
the Ag_2Se–In_2Se_3–$SnSe_2$ system 193
eutectoid decomposition in rapidly solidified α-Fe_2Si_3-based thermoelectric alloys 212
Thermodynamic measurements
thermodynamics, kinetics and modeling studies of the $LaNi_{5-x}Co_x$ hydride system 93
Thermodynamic modelling
concentration fluctuations and thermodynamic properties of ternary liquid alloys 226
Thermodynamic properties
standard enthalpies of formation of lanthanum gallides by high temperature reaction calorimetry 124
concentration fluctuations and thermodynamic properties of ternary liquid alloys 226
structural and thermochemical studies on Cr_2TeO_6 and Fe_2TeO_6 264
Thermodynamic properties (D)
standard enthalpies of formation of cerium gallides by high temperature reaction calorimetry 159
Thermoelectric power
thermoelectric power of hydrogenated palladium and some of its dilute alloys, between 80 and 300 K 82
Thin film
stresses induced by hydrogen absorption and desorption in Pd nanofilms 280

Thiooxides
structure refinement of samarium monothio oxide 90
Titanium
enthalpy measurements of the solid high-temperature β-phase of titanium and zirconium by levitation drop calorimetry 175
Transition metal alloys
$Fe_{16}Nb_6Si_7$ and $Fe_{16}Ta_6Si_7$: New D8$_5$ phases synthesized by the crystallization of mechanically alloyed amorphous powders 203
eutectoid decomposition in rapidly solidified α-Fe_2Si_5-based thermoelectric alloys 212
hard magnetic properties and magnetocaloric effect in amorphous NdFeAl ribbons 260
crystal structure of two hydrides formed from a Ti–V–Mn BCC solid solution alloy studied by time-of-flight neutron powder diffraction — a NaCl structure and a CaF_2 structure 284
Transition metal compounds
multi-magnetic transitions in $Tb_2Mn_3Si_5$ L1
transformations of magnetic phase diagram as a result of insertion of hydrogen and nitrogen atoms in crystalline lattice of $RFe_{11}Ti$ compounds 46
crystal structure, magnetic and electrical properties of new ternary indides RPtIn (R=Pr, Sm) 64
change in the magnetic state of antiferromagnetic $La(Fe_{0.88}Al_{0.12})_{13}$ by hydrogenation 70
single-crystal investigation of the neodymium rhodium germanides $NdRh_2Ge_2$, $Nd_2Rh_3Ge_5$ and $NdRh_{0.79}Ge_{0.54}$ 220
new ternary $Ce_6Ni_2Si_3$-type $Sm_6\{Co, Ni\}_2Si_3$ compounds and their interaction with hydrogen 236
magnetocaloric effects of Laves phase $Er(Co_{1-x}Ni_x)_2$ compounds 245
magnetic properties of melt-spun $(Nd,Dy)_2Fe_{14}(B,C)$ 290
Transmission electron microscopy
eutectoid decomposition in rapidly solidified α-Fe_2Si_5-based thermoelectric alloys 212

XPS
electrochemical preparation of crystallized $Ba_{1-x}Sr_xMoO_4$ solid-solution films at room-temperature 250
XPS measurements
electronic structure calculations for the ternary intermetallic compounds A_2MX and AMX_2 (A=Li; M=Rh, Pd, Ir, Pt; X=Al, Ga, In) using density-functional theory 1

X-ray and neutron diffraction
temperature dependent X-ray and neutron diffraction study of the liquid–solid and solid–solid equilibria in the $Al_{29.2}Ga_{27}Zn_{43.8}$ ternary alloy 179
X-ray diffraction
single crystal investigation of the binary NdB_4 compound L4
structural and magnetic properties of the rare-earth–borocarbides, $R_5B_2C_6$ (R=Y, Ce–Tm) 75
structure refinement of samarium monothio oxide 90
studies on the thermal dehydration behavior of $Ln[Fe(CN)_6]\cdot nH_2O$ (Ln=La–Yb; n=4, 5) by means of controlled-rate thermal analysis and Raman spectrometry 107
flux synthesis, structure and physical properties of new pseudo-binary $REAl_{1-x}Ge_x$ compounds 137
estimation of effective ionic radii in highly defective perovskite-type oxides from experimental data 153
phase equilibria in the Hf–Ni–Sn ternary system and crystal structure of the Hf_2Ni_2Sn compound 169
crystal structure of RAgPb (R=La, Ce, Pr, Nd, Sm, Gd, Tb, Dy, Ho) compounds 209
eutectoid decomposition in rapidly solidified α-Fe_2Si_5-based thermoelectric alloys 212
single-crystal investigation of the neodymium rhodium germanides $NdRh_2Ge_2$, $Nd_2Rh_3Ge_5$ and $NdRh_{0.79}Ge_{0.54}$ 220
the Pb–In–Se system: phase diagram of the Se-rich part 239
homogeneity range, crystal structure and magnetic properties of the $ThMn_{12}$-type compounds $Gd_{1-n}Nd_n(Fe,Mo)_{12}$ (n=0–1.0) 299
microstructure evolution of an equimolar powder mixture of ZrO_2–TiO_2 during high-energy ball-milling and post-annealing 316
XRD
electrochemical preparation of crystallized $Ba_{1-x}Sr_xMoO_4$ solid-solution films at room-temperature 250

Zintl phases
electronic structure calculations for the ternary intermetallic compounds A_2MX and AMX_2 (A=Li; M=Rh, Pd, Ir, Pt; X=Al, Ga, In) using density-functional theory 1
Zirconium
enthalpy measurements of the solid high-temperature β-phase of titanium and zirconium by levitation drop calorimetry 175
ZrO_2–TiO_2 crystalline equimolar mixture
microstructure evolution of an equimolar powder mixture of ZrO_2–TiO_2 during high-energy ball-milling and post-annealing 316